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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,032	06/07/2001	Alan H. Gnauck	3493.00174 (IDS) 2000-0561	6060

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EXAMINER

CHAN, ALEX H

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 03/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/875,032

Applicant(s)

GNAUCK ET AL.

Examiner

Alex H Chan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date Z.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-31** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,661,975 B1 to Hall et al (hereinafter Hall).

Regarding claims 1-31, Hall discloses a method or system for increasing transmission distance or data rate (e.g. via power efficient and multi-rate data signal, Fig. 2) of a fiber optical communication link using tedons comprising the steps of encoding a data signal (via 44) to be transmitted using an encoding scheme (e.g. pulse position modulation, Col. 7, lines 30-35) that reduces a number of ones in said data signal (e.g. using $\frac{1}{4}$ data rate reduces number of ones compared to Full or $\frac{1}{2}$ data rate, Fig. 3); transmitting said encoded data signal (via 22 and 38) over said fiber optical communications link (26 and Col. 3, lines 5-7); receiving said encoded data signal (via 24 and 52); and decoding said encoded data signal (via 68 and Col. 4, lines 60-66).

3. **Claims 1-31** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,295,318 B1 to Wingard.

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Regarding claims 1-31, Wingard discloses a method for increasing transmission distance or data rate of a fiber optical communication link (Col. 2, lines 26-30 and Fig. 2) using tedons (Col. 2, lines 34-62) comprising the steps of encoding a data signal (via 206) to be transmitted using an encoding scheme (e.g. pulse position modulation, Col. 4, lines 50-55) that reduces a number of ones in said data signal (e.g. Fig. 4); transmitting said encoded data signal over said fiber optical communications link (via 216 and Col. 15, lines 34-38); receiving said encoded data signal (via 220); and decoding said encoded data signal (via 224).

4. **Claims 1-31** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,341,023 B1 to Puc.

Regarding claims 1-31, Puc discloses a method or system for increasing transmission distance or data rate (Col. 1, line 59-Col. 2, line 5) of a fiber optical communication link using tedons comprising the steps of encoding a data signal (e.g. via 120 of Fig. 1 or 133 of Fig. 2) to be transmitted using an encoding scheme (e.g. pulse position modulation, Col. 3, lines 1-14 and Col. 4, lines 1-24-26) that reduces a number of ones in said data signal; transmitting (e.g. via 100 of Fig. 1) said encoded data signal over said fiber optical communications link (via 200 of Fig. 1); receiving (via 300 of Fig. 1) said encoded data signal; and decoding (via 320 of Fig. 1 or 335 of Fig. 3) said encoded data signal (Col. 7, lines 64-67).

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5. **Claims 1-31** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,384,945 B1 to Hakimi et al (hereinafter Hakimi).

Regarding claims 1-31, Hakimi discloses a method or system for increasing transmission distance or data rate (Fig. 16 and Fig. 17) of a fiber optical communication link using tedons (e.g. sequences of pulses that are close in spacing (i.e. large bandwidth)) comprising the steps of encoding (via 280 of Fig. 16) a data signal to be transmitted using an encoding scheme (e.g. pulse position modulation, Col. 11, lines 1-13) that reduces a number of ones in said data signal; transmitting (via 253 of Fig. 16) said encoded data signal over said fiber optical communications link (via 52 of Fig. 16); receiving (via 290 of Fig. 17) said encoded data signal; and decoding said encoded data signal (via 254 of Fig. 17).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Alameh et al (Fig. 1) and Rybicki et al (Fig. 4-7, 9, 21 and 34) are cited to show how pulse position modulation reduces the number of ones.

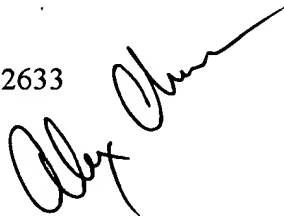
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex H Chan whose telephone number is (703) 305-0340. The examiner can normally be reached on Monday to Friday (8am to 6pm EST).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alex Chan
Patent Examiner, AU 2633
March 1st, 2004



JASON CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600